

Surface Conditioning

Abrasives

NONWOVEN ABRASIVES



Shining, Fast and Durable

Deburring

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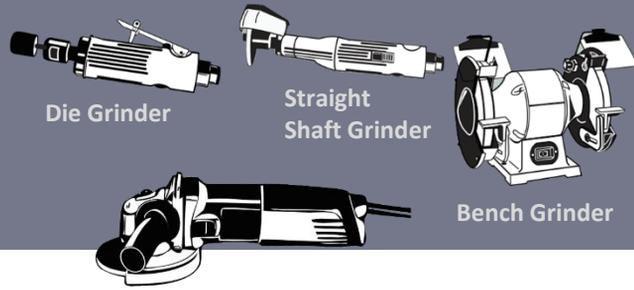
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EXU Unitized Wheel



3 EXU Unitized Wheel

Excel Unitized Wheel is designed for maintenance operations needing an efficient and cost-effective method of deburring, polishing, cleaning or finishing metals and composites. Easily performed for use on a wide variety of shapes/contours. Hold shape well; less wheel dressing. Non-metallic so no contamination of workpiece. Uniform construction maintains part tolerance. It's the better choice for light weld bead and weld splatter removal, heavy deburring and finishing applications.

Features

- Improved resin bond system
- Uniform coating and controlled porosity
- Aggressive, fast, stock removal, reduced cycle times, and increased part quality
- 2X longer life and faster finishing-with minimal shedding
- Cool cutting and improved cut rate
- Diversified application form, such as wheel, right angle disc and rods, etc.



Hot models

Model	Series	Density	Grade	Outer Diameter	Thickness	Inner Diameter
EXU,3SFIN,3x1/4x1/4	EXU	3	FIN	3	1/4	1/4
EXU,2SFIN,3x1/4x1/4	EXU	2	FIN	3	1/4	1/4
EXU,2SFIN,3x1/2x3/8	EXU	2	FIN	3	1/2	3/8
EXU,3SFIN,6x1/4x1	EXU	3	FIN	6	1/4	1
EXU,3SFIN,8x1/2x3/4	EXU	3	FIN	8	1/2	3/4
EXU,2SFIN,8x1/2x3/4	EXU	2	FIN	8	1/2	3/4
EXU,2AMED,3x1/4x1/4	EXU	2	MED	3	1/4	1/4
EXU,6AMED,3x1/8x1/4	EXU	6	MED	3	1/8	1/4
EXU,8AMED,3x1x1/2	EXU	8	MED	3	1	1/2
EXU,8ACRS,3x1/4x1/4	EXU	8	CRS	3	1/4	1/4
EXU,8ACRS,3x1x1/4	EXU	8	CRS	3	1	1/4
EXU,2SFIN,4 1/2 x7/8	EXU	2	FIN	4 1/2	-	7/8
EXU,3SFIN,2x1/4NH	EXU	3	FIN	2	1/4	NH
EXU,2AMED,2x1/4NH	EXU	2	MED	2	1/4	NH
EXU,7SFIN,6x1/4x1	EXU	7	FIN	6	1/4	1
EXU,8AMED,6x1/4x1	EXU	8	MED	6	1/4	1
EXU,8ACRS,6x1/4x1	EXU	8	CRS	6	1/4	1

Availability

Model	Market Countpart	Density	O.D.	Thickness	I.D.	Grade
EXU Unitized Wheel	EXL Unitized Wheel	2S,3S,5A 6A, 7A,8A,2C,3C,4C,5C, 6C, 8C	1",2",3", 4", 4.5", 5", 6", 8"	1/8", 1/4", 3/8",1/2", 1"	1/8", 1/4", 3/8",1/2", 1"	XCRS, CRS, MED, FIN

Laser Braze Wheel & FDU Unitized Wheel



4 Laser Braze Wheel

Embedded new generation ceramic grain and highly performed bonding technology, these LB wheels are featured with very high density, precise thickness, strong and efficient cutting performance which offer:

- Longer life — allowing you to process more vehicles between wheel changes.
- Delivers a consistently smooth, paintable finish, throughout the life of the wheel.
- Fast weld leveling and soot removal
- More options on hardness : Hard version and flexible version
- Reinforced version is more hard and suitable for high pressure application



Standard Version



Reinforced Version

LBW availability

Model	Series	Density	Grade	Outer Diameter	Thickness	Inner Diameter
LBW,8C,200X4.2X25	LBW	8C	CRS/XCRS	200	4.2	25
LBW,8C,200X3.5X25	LBW	8C	CRS/XCRS	200	3.5	25
LBW,8C,200X3.2X25	LBW	8C	CRS/XCRS	200	3.2	25
LBW,8C,200X2.9X25	LBW	8C	CRS/XCRS	200	2.9	25
LBW,8C,150X3.5X25	LBW	8C	CRS/XCRS	150	3.5	12.7
LBW,8C,127X3.5X22	LBW	8C	CRS/XCRS	127	3.5	22

5 FD Unitized Wheel

Finish & Debur Unitized Wheel is designed for Oil & Gas Tubular Goods, Ideal for API, Semi-Premium & Premium Oil Country Tubular Goods Threads

- Longer wheel life in deburring applications
- Minimal dust and debris – less dust equals less cleanup
- Improved operator “feel”
- Minimizes thread overcutting – results in fewer rejects

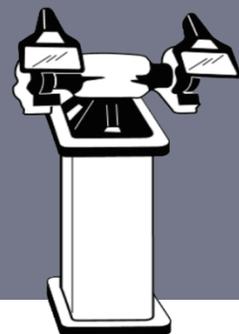
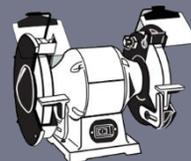


FD availability

Product	Market Bench	Density	O.D.	Thickness	I.D.	Grit
			inch	inch	inch	
FD Unitized Wheel	Debur&Finish Pro wheel	2S,3S,4S, 6S, 2C,3C,4C,5C, 6C, 8C	1",2",3", 4", 4.5", 5", 6", 8"	1/8", 1/4", 3/8", 1/2", 1"	1/8", 1/4", 3/8", 1/2", 1"	CRS+, MED+, FIN



SP Highly Performed Unitized Wheel



Pedestal Grinder

1 SP Unitized Wheel

As a black color wheel containing black silicon carbide mineral, SP is very durable, high performance unitized wheel focused on Asia hardware market. With its specially designed formulation, SP wheel serves in sanding, finishing and polishing applications in various kinds of metal parts, such as sport ware, turbines, clinical tools, auto parts, stainless tanks, etc. it possesses:

Features

- Long and evenly distributed shining surface quality
- More than 2.5 times of longer life
- Low dust to ensure healthy production
- Excellent dynamic balance
- Low re-work rate
- Excellent thermal resistance, no smearing



2 SPH Unitized Wheel

The outer diameter of SPH unitized wheel is 350mm and it's specially designed for stainless steel cups neck deburring and polishing. It exhibits excellent surface conditioning quality, excellent dynamic balance, longer durability and smearing free, making your work more efficient and cost saving. This series of wheel is the best choice for these applications which pursuing high efficiency, longer life and better cost.



Hot models

Model	Series	Density	Grade	Outer Diameter	Thickness	Inner Diameter
SPH,9SCRS,350×50×18	SPH	9S	CRS	350	50	18
SPH,9SMED,350×50×18	SPH	9S	MED	350	50	18
SPH,7SCRS,350×50×18	SPH	7S	CRS	350	50	18
SPH,7SMED,350×50×18	SPH	7S	MED	350	50	18
SPH,5SCRS,350×50×18	SPH	5S	CRS	350	50	18
SPU,9SCRS,300×50×50	SPU	9S	CRS	300	50	50
SPU,9SMED,300×50×50	SPU	9S	MED	300	50	50
SPU,9SFIN,300×50×50	SPU	9S	FIN	300	50	50
SPU,7SCRS,300×50×50	SPU	7S	CRS	300	50	50
SPU,7SMED,300×50×50	SPU	7S	MED	300	50	50
SPU,7SFIN,300×50×50	SPU	7S	FIN	300	50	50
SPU,8SMED,300×50×50	SPU	8S	MED	300	50	50
SPU,5SCRS,300×50×50	SPU	5S	CRS	300	50	50
SPU,9SFIN,200×50×18	SPU	9S	FIN	200	50	18
SPU,9SMED,200×50×18	SPU	9S	MED	200	50	18
SPU,8SMED,200×50×18	SPU	8S	MED	200	50	18
SPU,7SFIN,200×50×18	SPU	7S	FIN	200	50	18
SPU,6SFIN,200×50×18	SPU	6S	FIN	200	50	18
SPU,8SFIN,150×25×12	SPU	8S	FIN	150	25	12

TG, TB High Cut Unitized Wheel

6 TG Unitized Wheel

TG unitized wheel is a green color nonwoven wheel containing green silicon carbide mineral. It is designed to satisfy most common metal polishing applications such as sanding, finishing, blending and polishing. It exhibits white shine gloss, higher cutting performance and advantageous life. TG wheel performs even better on harder materials, such as ceramic coating and hard alloy owe to the special green silicon carbide mineral it is embedded. It serves in sanding, finishing and polishing applications in various kinds of metal parts, such as cups, pipes, knives, scissor, tanks, kitchenware...etc.



Features

- Uniform coating delivers better overall performance
- Long and evenly distributed white shining surface finishing
- White shining and long finishing lines on surface
- At least 1.5 X Longer life
- Green silicon carbide mineral makes it possible for harder materials
- Excellent dynamic balance
- Low re-work rate
- Excellent thermal resistance, no smearing



Hot models

Model	Series	Density	Grade	Outer Diameter	Thickness	Inner Diameter
TGW,9S180,350×50×18	TGW	9	180	350	50	18
TGW,7S180,350×70×40	TGW	9	180	350	70	40
TGW,7S240,350×50×18	TGW	9	240	350	50	18
TGW,9S150,350×50×18	TGW	9	150	350	50	18
TGW,9S180,300×50×18	TGW	9	180	300	50	18
TGW,5S150,300×50×50	TGW	5	150	300	50	50
TGW,7S180,300×50×50	TGW	7	180	300	50	50
TGW,9S180,200×50×18	TGW	9	180	200	50	18
TGW,9S120,200×50×18	TGW	9	120	200	50	18
TGW,7S150,200×50×18	TGW	7	150	200	50	18
TGW,7S240,300×50×18	TGW	7	240	300	50	18
TGW,9S120,150×40×12	TGW	9	120	150	40	12

7 TB Unitized Wheel

TB unitized wheel is a black color nonwoven wheel containing black silicon carbide mineral and is designed to satisfy most common metal polishing applications in low tier market. It is cost-effective unitized wheel focused on Tier B and C Asia hardware market. TB 8P120 350X50X18 is very suitable for painting removal of cups.

Features

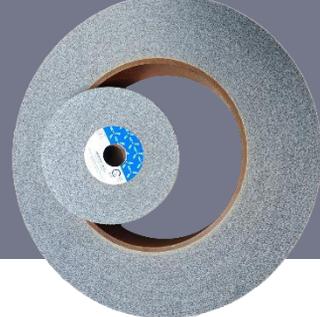
- White shining and long finishing lines on surface
- At least 1.2 X Longer life
- Excellent dynamic balance
- Excellent thermal resistance, no smearing
- Excellent anti-loading performance



TG/TB availability

Models	Density/Hardness	O.D. mm	Thickness mm	I.D. mm	Grade
TG/TB Unitized Wheel	4P-12P	50-400	3.0-100	12-127	P60-P400

DEX, LDP Convolute Wheel



8 Deburr EXL Convolute Wheel

The DEX convolute wheels are most commonly used convolute non-woven abrasive wheel which is constructed with premier resin bonding formulation. This wheel family has provided customers with an broad solutions for deburring, radiusing, finishing and blending their metal parts, such as metal cutting edge burrs, keyway burrs, wire edge burrs, piston ring burrs, aluminum profile burrs, burrs on forming parts, parts flashes, etc.

Features

- Smear-free and heat-resistant formulation
- Dense web construction
- Different density levels to meet diversified customer needs
- Extended grades from CRS, MED to FIN
- Suited for a broad range of deburring application
- Use both wet and dry
- durable for heavy deburring, removing parting lines on exotic metals

Santa Convolute Wheel	Competitor Products to replace
DEX 7S, 8S, 9S	Scotch-Brite EXL 7S, 8S, 9S
DEX 10S	Scotch-Brite EX2 9S
DEX 11S	Scotch-Brite EX3 9S
DEX Pro	Scotch-Brite EXL Pro

9 LDP Convolute Wheel

LDP is best choice for various of light deburring and precision polishing. It is designed to provide a clean and consistent system for removing fine burrs while providing a highly polished finish. LDP wheels will maintain critical tolerances while still providing a fine polished finish. LDP can be used as a substitute for imported light debur wheel. The applications include polishing of sport ware, surgical tools, coreless polishing, auto parts etc.

Feature

1. Excellent conformability;
2. Consistent finishing for light deburring application
3. Excellent uniform surface polishing
4. Low dust to ensure healthy production



10 LDH Convolute Wheel

LDH is the supplemental version of LDP, it maintained most of the properties of LDP wheel which enhanced the cutting and finishing performance .



Availability of DEX, LDP and LDH

Models	Replacable	Density	O.D. inch	Thickness inch	I.D. inch	Grade
DEX Wheel (DEX,DEX3, DEX Pro)	Scotch-Brite EXL Convolute Wheel	7S, 8S, 9S,10S,11S	6", 8",10", 12",14"	1/2", 1", 1.5", 2", 4", 35"	1", 3", 5",8"	FIN, MED, CRS
LDP Wheel	Scotch-Brite Light Deburring Convolute Wheel	6S, 7S, 8S, 9S	6", 8",10", 12",14"	1/2", 1", 1.5", 2", 4", 35"	1", 3", 5",8"	FIN, VFN
LDH Wheel	Rapid Finishing	7S, 8S, 9S,10S	6", 8",10", 12"	1/2", 1", 1.5", 2", 4", 35"	1", 3", 5"	MED, FIN,VFN

CP, RF and LP Convolute Wheel



11 Cut & Polish Convolute Wheel

The CP wheel are hard and high cut convolute wheel with bright and dense scratch finishing.

Features

- Hard structure and better cutting performance
- Excellent anti-loading performance
- Applicable to Aluminum alloy materials

12 Rapid Finish Convolute Wheel

RF wheel is constructed with more mineral and higher density while keeping appropriate hardness to satisfy various applications. It is suitable for highly efficient finishing and light deburring. It is a good substitution of Bear-Tex 1000 series long life convolute wheel.

Feature

1. High density while keeping appropriate hardness
2. Rapid and consistent finishing



13 Light Polishing Convolute Wheel

LP wheel is professional on precision finishing and polishing, it can achieve super fine and dark shining surface conditioning pattern. LP wheel has several grade including VF, SF, UF, etc. target for the applications request final finishing to achieve best surface conditioning quality.

Feature

1. Multiple choices of grade, especially finer grade
2. Consistent finishing for light polishing application
3. No scratches
4. Preparation before mirror-like surface



Availability of CP, RF and LP wheel

Models	Replacable	Density	O.D. inch	Thickness inch	I.D. inch	Grade
CP Convolute Wheel	Cut&Polish Wheel	5A, 7A	6", 8", 10", 12"	1/2", 1", 1.5", 2", 4", 35"	1", 3", 5"	CRS, MED, FIN, VFN
Rapid Finish Convolute Wheel	Norton Rapid Finishing Wheel	7S, 8S, 9S	6", 8", 10", 12"	1/2", 1", 1.5", 2", 4", 35"	1", 3", 5"	MED, FIN
Light Polishing Convolute Wheel	MG wheel PVA wheel	7S, 8S, 9S	6", 8", 12", 14"	1/2", 1", 1.5", 2", 4", 35"	1", 3", 5", 8"	VFN, SFN, UFN, MFN

MF Convolute Wheel

14 Multi Finish Convolute Wheel

MF convolute wheels are most conformable convolute wheel designed for bright and coarser finish with a wide scratch pattern.

Features

- Conformability is excellent
- Create bright and coarser satin finish
- Scratches are wide
- Web structure is open and anti-loading

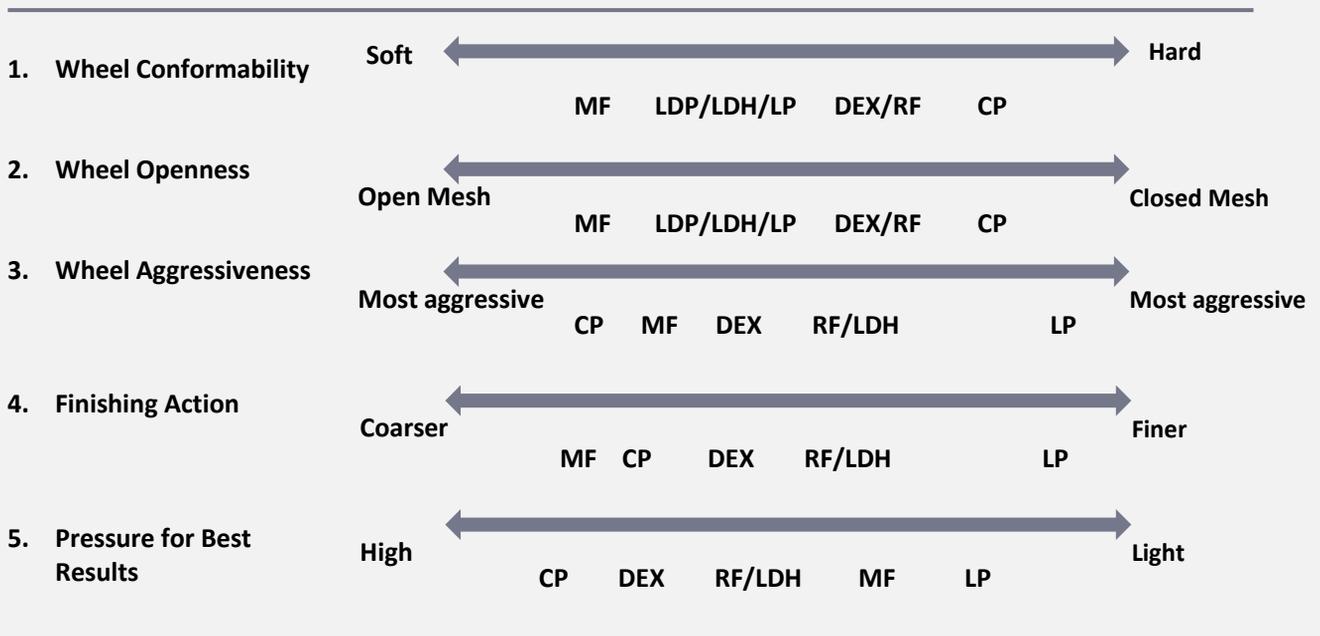


Availability of MF wheel

Models	Replacable	Density	O.D. inch	Thickness inch	I.D. inch	Grade
MF Convolute Wheel	Scotch-Brite Multi-finishing Wheel	2S, 3S, 4S, 4A, 5A,6A	6", 8", 10", 12", 14"	1/2", 1", 1.5", 2", 4", 35"	1", 3", 5", 8"	XC, CRS, MED, FIN

Factors in Wheel Choice

This chart provides a relative comparison of other Santa wheel variables. It can serve as a useful guide in choosing the most suitable product for a given application. However, as many other factors affect wheel performance, this chart can only be general in nature. The most cost-effective results can always be obtained by wheel testing on the application



Santa Wheel Safety

Maximum Operating Speed-M.O.S.

The safety performance of Santa abrasive wheels is strictly tested and has clear safety operation instructions. However, it is still essential to install and use it properly and stick to the safety instruction. Each product is labeled with the Maximum Operating Speed. The actual operating speed can not exceed the maximum operating speed. Moreover, please pay attention to the mechanical protection, wear mask, safety glass and safety shoe. Optimize the ventilation of the workshop.

When operating convolute wheel, please pay special attention to the arrowhead marked on the product, and the direction of the arrow is the rotation direction of the wheel. The product must be operated with the right direction.

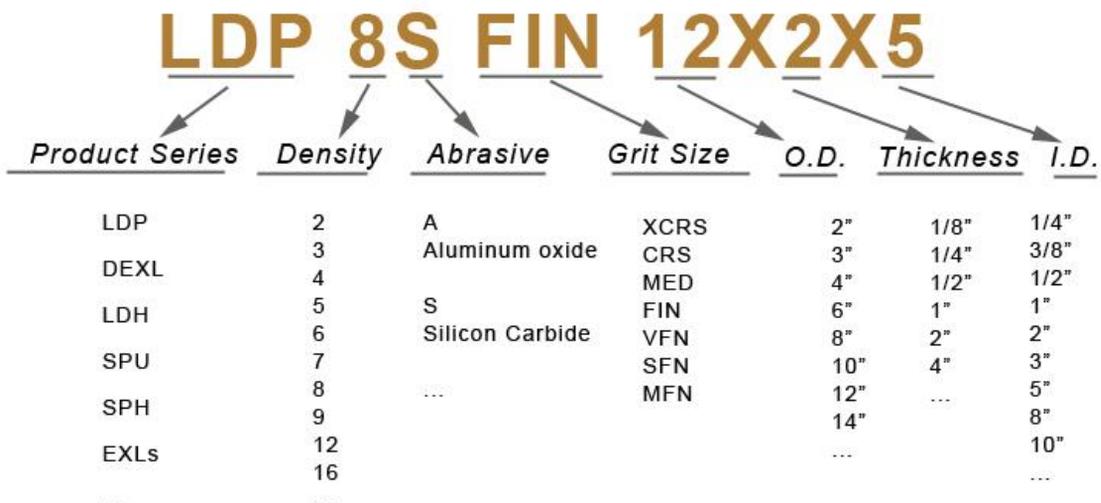
Grade Contrast

Santa Grade	Grit Size
XC	24-36
CRS	50-80
MED	100-150
FIN	180-320
VFN	320-400
SFN	600-800

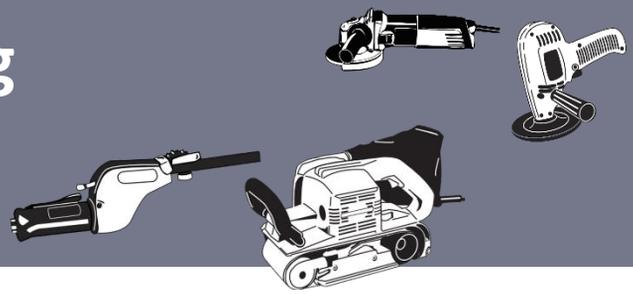
Convolute Wheel Maximum Operating Speeds (RPM)	
Diameter	M.O.S. (RPM)
4"	9000
6"	6000
8"	4500
10"	3600
12"	3000
14"	2550
16"	2250

Unitized Wheel Maximum Operating Speeds (RPM)	
Diameter	All Wheels (RPM)
1"	35000
2"	22000
3"	15100
5"	7000
6"	5000
8"	4000
10"	3200
12"	2800
14"	2400

Wheel Naming

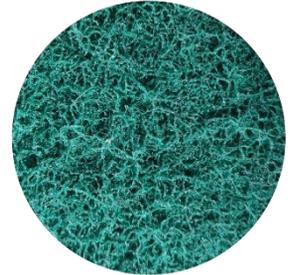


Surface Conditioning Belt/Disc



Surface Conditioning Belts

Surface conditioning belts/discs provide better surface conditioning performance, longer life, better anti-smear performance, less rework and significant cost savings. These belts are ideal for removing surface defects, edge burrs, parting lines or flashing, rust, oxides, corrosion, paints and scale, cleaning molds, blending mill marks, tool marks, uneven edges and refining coated abrasive finish. The result is an innovative product that offers superior results and leaves perfectly finished, smear-free surfaces.



Dura-Flex Belts



DFB belts are a good choice for surface conditioning jobs where a very flexible backing is required particularly in file belt applications when working over the edge of a contact wheel and slack-of-belt applications. The combination of an extremely flexible high performance backing, and reliable belt joint, delivers a product that resists shedding and chunking and outlasts competitive belts up to 3X.

- Proprietary anti-smear technology
- Premium aluminum oxide abrasive proprietary new coating system
- Longer-durability
- Available in 4 grades from Coarse through to Very Fine

Anti-Loading Belts

AL belts are special resin bonded non woven belt which are excellent in cutting performance and generate a bright and wide finish on the surface. It is excellent in grinding and finishing these materials which are easy to load. And this series product can be converted into discs for right angle application.

- Rapid finishing performance
- Excellent anti-loading performance
- Multiple grade choices



Availability



Surface Conditioning Products	Backing	Flexibility	Anti-loading Performance	Grade	Converting Type
Dura-Flex	Polyester Cloth	Very flexible	Acceptable	CRS, MED, FIN, VFN	Belt
Anti-Loading	Polyester Cloth	less flexible	Excellent	XCRS, CRS, MED, FIN, VFN	Belt, Disc



Art of Abrasives

Santa manufactures and supplies various types of world class surface conditioning Nonwoven Abrasive Wheels, belts and discs, which includes super performance unitized wheel (SPU), light debur and polish wheel (LDP), debur excel wheel (DEX), light polishing (LP), rapid finish wheel (RF), metal finishing Wheel. TG/TB high cut polishing unitized wheels for general purpose applications and surface conditioning nonwoven abrasive disc and belts.

With extremely Long durability, excellent surface conditioning performance, excellent dynamic balance, excellent thermal resistance, capable of serving at heavy loading/critical working condition, friendly to health and environment, Santa's products applied in various industries in the world, gaining more and more reputation. Santa never compromises to quality, innovation and development and implement of new technologies, always devoted to provide the best solutions as well as best value to our customers. We are expecting to cooperate with you and deliver high performance product and the best value to the world.

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